

ABSTRACT

Presence or absence of modification on a particular amino acid in a protein or the kind of the modifying group thereon is determined easily. A reagent labeling the side chain of a particular amino acid residue in a protein to be analyzed is allowed to react. When the side chain of the particular amino acid residue is in the unmodified state, the side chain is labeled (S101). The protein containing the particular amino acid residue having the labeled side chain is then cleaved at a predetermined site specifically (S102). The peptide fragments thus obtained are then analyzed by mass spectrometry. (S103). Then, the modification state of the side chain of the particular amino acid residue in the protein to be analyzed is analyzed, based on the results obtained about the molecular weights of the fragments (S104).